## **ABSTRACT**

A method for modulating in a cell the expression of one or more genes involved in the biosynthesis of a metabolite or a precursor for this metabolite by inserting into a cell a nucleotide sequence coding for a transcription factor comprising an AP2 DNA-binding domain, and/or by modifying the expression of a nucleotide sequence coding for such a transcription factor already present in the cell is provided. The method is useful for enhancing the biosynthesis of secondary metabolites in plants such as alkaloids including terpenoid indole alkaloids. Also provided is a method for enhancing stress tolerance in plants by the use of such transcription factors.